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ROCKY MOUNTAIN FOREST & RANGE EXPERIMENT STATION
ARIZONA STATE COLLEGE
TEMPE, ARIZONA

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U S FOREST SERVICE

UNITED STATES DEPARTMENT OF AGRICULTURE

FOREST SERVICE

NATIONAL FOREST FACTS
SOUTHWESTERN REGION
ARIZONA AND NEW MEXICO
1946

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Rocky Mountain Forest and Range Experiment Station
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Tempe, Arizona

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PUBLICATIONS

"National Forest Facts"

Issued for the furtherance of knowledge about forest resources in the Southwestern Region of the Forest Service, U. S. Department of Agriculture -- often called Region 3. It includes the 13 national forests in Arizona and New Mexico.

REGIONAL FORESTER
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1946

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ORIGIN OF NATIONAL FORESTS IN THE SOUTHWEST

Dates of Proclamations and Executive Orders Establishing Them	ARIZONA	Original Names and Present Names
	Apache National Forest	
August 17, 1898		Black Mesa Forest Reserve.
July 1, 1908		Part of the Black Mesa Forest Reserve became the Apache N.F.*
(The above covers only the portion of the Apache N.F. in Arizona)		
	Coconino National Forest	
August 17, 1898		San Francisco Mountains Forest Reserve
July 2, 1908		All of the San Francisco Mountains Forest Reserve and parts of the Black Mesa, Tonto and Grand Canyon Forest Reserves were consolidated under name of Coconino N.F.
	Coronado National Forest	
November 5, 1906		Baboquivari Forest Reserve.
November 6, 1906		Huachuca Forest Reserve.
November 7, 1906		Tumacacori Forest Reserve.
July 2, 1908		Baboquivari, Huachuca and Tumacacori Forest Reserves consolidated under name of Garces N.F.
April 11, 1902		Santa Rita Forest Reserve.
July 2, 1902		Santa Catalina Forest Reserve.
May 25, 1907		Dragoon N.F.
July 2, 1908		Santa Rita, Santa Catalina and Dragoon N.Fs. consolidated under name of Coronado N.F.
April 17, 1911		Garces and Coronado N.Fs. consolidated under name of Coronado N.F.
July 30, 1902		Chiricahua Forest Reserve.
November 5, 1906		Peloncillo Forest Reserve.
July 2, 1908		Chiricahua and Peloncillo Forest Reserves consolidated under name of Chiricahua N.F. (Portion of the Peloncillo in New Mexico.)

* The term "National Forest" is abbreviated in this section.

Coronado National Forest (Continued)

July 6, 1917	Chiricahua and Coronado N.Fs. consolidated under name of Coronado N.F.

(The above covers the entire Forest in Arizona and New Mexico)

Crook National Forest

July 22, 1902	Mt. Graham Forest Reserve.
March 20, 1905	Pinal Mountains Forest Reserve.
October 3, 1905	Tonto Forest Reserve.
January 13, 1908	Pinal Mountains Forest Reserve became part of Tonto N.F.
July 1, 1908	Parts of the Mt. Graham and Tonto N.Fs., including Pinal Mountains area, consolidated under name of Crook N.F.
January 23, 1925	518,431 acres transferred from Apache N.F. to Crook N.F.

Kaibab National Forest

February 20, 1893	Grand Canyon Forest Reserve.
July 2, 1908	All of the San Francisco Mountains and parts of the Black Mesa, Tonto and Grand Canyon Forest Reserves consolidated under name of Coconino N.F.
June 28, 1910	Part of Coconino N.F. together with certain other land not heretofore reserved became Tusayan N.F.
May 22, 1908	Dixie N.F. (Arizona).
July 2, 1908	Kaibab N.F.
March 18, 1924	Dixie consolidated with Kaibab N.F.
August 4, 1934	Tusayan and Kaibab N.Fs. consolidated.

Prescott National Forest

May 10, 1898	Prescott Forest Reserve.
December 30, 1907	Verde Forest Reserve.
July 2, 1908	Prescott and Verde N.Fs. consolidated under name of Prescott N.F.
October 22, 1934	249,201 acres transferred from Tusayan to Prescott N.F.

Sitgreaves National Forest

July 1, 1908	Parts of the Black Mesa and Tonto N.Fs. consolidated under name of Sitgreaves N.F.

Tonto National Forest

October 3, 1905	Tonto Forest Reserve.
October 22, 1934	Bloody Basin transferred from Prescott to Tonto N.F. (151,285 acres).

NEW MEXICO

Apache National Forest

January 23, 1925	A portion of Datil N.F. was transferred to Apache N.F. This portion was originally part of the Magdalena and Gila River Forest Reserves.

Carson National Forest

November 7, 1906	Taos Forest Reserve.
July 1, 1908	Carson N.F. created by consolidation of Taos N.F. and part of Jemez N.F.
June 16, 1923	63,708 acres in Taos County transferred from Santa Fe N.F. to Carson N.F.

Cibola National Forest

October 5, 1906	Mt. Taylor Forest Reserve.
November 5, 1906	San Mateo Forest Reserve. Magdalena Forest Reserve.
November 6, 1906	Manzano Forest Reserve.
April 16, 1908	Mt. Taylor N.F. consolidated with Manzano N.F.
June 18, 1908	Creating the Datil N.F.
July 2, 1908	San Mateo N.F. added to Magdalena N.F.
February 23, 1909	Magdalena and Datil N.Fs. consolidated.
March 2, 1909	Zuni N.F.
September 10, 1914	Zuni N.F. consolidated with Manzano N.F.
December 3, 1931	Name of the Manzano changed to Cibola N.F. and a portion of the Datil transferred to the Cibola.

Gila National Forest

March 2, 1899	Gila River Forest Reserve.
February 6, 1907	Big Burros Forest Reserve.
June 18, 1908	Consolidating the Big Burros with Gila N.F.
December 24, 1931	A portion of the Datil was transferred to the Gila N.F.

Lincoln National Forest

July 26, 1902	Lincoln Forest Reserve.
November 5, 1906	Gallinas Forest Reserve.
April 19, 1907	Guadalupe N.F.
April 24, 1907	Sacramento N.F.
July 2, 1908	Guadalupe and Sacramento N.Fs. consolidated as Alamo N.F. The Gallinas and Lincoln N.Fs. consolidated as Lincoln N.F.
June 6, 1917 (effective July 1)	Alamo N.F. transferred to the Lincoln N.F.

Santa Fe National Forest

January 11, 1892	Pecos River Forest Reserve.
October 12, 1905	Jemez Forest Reserve.
July 1, 1908	Pecos River N.F. changed to Pecos N.F.
July 1, 1915	Jemez and Pecos N.Fs. consolidated as the Santa Fe N.F.

October 3, 1905	Portales Forest Reserve.
March, 1907	Portales Forest Reserve restored to the public domain.

NOTE: The foregoing covers only changes of name and major transfers. There have been many additions, eliminations and changes in boundaries not listed.

FIRE RECORD FOR 1945

Calendar Year

Forest and State	A Less Than ¼ A.	B ¼ A. & Less Than 10 A.	C 10 A. & Less Than 100 A.	D 100 A. & Less Than 300 A.	E Over 300 A.	Total	Class C-D-E Obj.	M.C. Fires	M.C. Obj.
ARIZONA									
Apache	69	12	4			85	2	10	9
Coconino	291	89	7			387	5	52	60
Coronado	19	13	2		1	35	5	9	9
Crook	38	12	2		1	53	3	6	5
Kaibab	88	19	2			109	2	33	37
Prescott	40	9	1			50	3	9	15
Sitgreaves	124	60	3			187	4	24	14
Tonto	80	43	4	1	1	129	5	19	10
Total ARIZONA	749	257	25	1	3	1035	29	162	159
NEW MEXICO									
Apache	28	16	1			45	2	8	7
Carson	30	15	3			48	2	23	14
Cibola	29	25	3	1		58	4	21	19
Gila	84	38	14		3	139	5	22	8
Lincoln	31	19	6		3	59	3	28	13
Santa Fe	66	37	11	1	1	116	3	24	15
Total NEW MEXICO	268	150	38	2	7	465	19	126	76
Total REGION 3	1017	407	63	3	10	1500	48	288	235

ACREAGE BURNED 1945

Forest and State	Gross Inside Boundaries	Area Burned Objective
ARIZONA		
Apache	112	160
Coconino	482	600
Coronado	178	1040
Crook	79	350
Kaibab	69	375
Prescott	108	400
Sitgreaves	254	300
Tonto	911	300
Total - ARIZONA	2193	3525
NEW MEXICO		
Apache	67	125
Carson	72	150
Cibola	262	300
Gila	2289	700
Lincoln	5898	500
Santa Fe	392	200
Total - NEW MEXICO	8980	1975
TOTAL - REGION 3	11173	5500

NATIONAL FOREST IMPROVEMENTS (GOVERNMENT OWNED) ON JUNE 30, 1945
(Includes Southwestern Forest & Range Exp. Station)

		ARIZONA		
	Fire Control and Administration	Number	Miles	Constrctn. Cost
1.	Fire Control Improvements			$ 122,608.01
2.	Lookout Houses, Towers & Observatories	69		
3.	Fire Control Water Facilities	1		
4.	Firebreaks		13.0	
	Administration Improvements			
5.	Communication Systems			428,958.41
6.	Telephone Lines		2,139.6	
7.	Dwellings and Related Improvements			711,204.00
8.	Dwellings	235		
9.	Other Structures	313		
10.	Water & Sanitary Systems	123		
11.	Warehouses, Shops and Offices			433,184.30
12.	Offices	52		
13.	Shops	9		
14.	Warehouses	208		
	Total	1,010	2,152.6	1,695,954.72
	Public Service			
15.	Recreation Use Improvements			1,012,754.91
16.	Campgrounds and Picnic Areas	157		
17.	Swimming Areas	3		
18.	Winter Sports Areas	7		
	Total	167		1,012,754.91
	Wildlife and Range Use Improvements			
19.	Range Use Improvements			3,152,956.09
20.	Range Fences and Corrals		6,880.7	
21.	Stock Driveways		178.8	
22.	Range Water Developments	2,305		
23.	Artificial Reseeding (Acres)	2,310		
24.	Wildlife Use Improvements			163,191.09
25.	Game Refuge Fences		7.8	
26.	Fish Rearing Ponds	15		
27.	Stream and Lake Improvements	39		
	Total	4,669	7,067.3	3,316,147.18
28.	Soil and Water Control Improvements			326,266.69
29.	ROADS		5,276.3	9,497,633.48
30.	TRAILS		3,971.1	540,974.59
	Total		9,247.4	10,364,874.76
	GRAND TOTAL	5,846	18,467.3	16,389,731.57

RANGER DISTRICTS IN REGION 3 -- TOTAL 76

ARIZONA		NEW MEXICO	
Apache National Forest	2	Apache National Forest	3
Coconino " "	6	Carson " "	6
Coronado " "	5	Cibola " "	6
Crook " "	6	Coronado " "	1
Kaibab " "	4	Gila " "	7
Prescott " "	6	Lincoln " "	5
Sitgreaves " "	4	Santa Fe " "	7
Tonto " "	8		
	41		35

NATIONAL FOREST IMPROVEMENTS (GOVERNMENT OWNED) ON JUNE 30, 1945
(Includes Southwestern Forest & Range Exp. Station)

	NEW MEXICO			TOTAL R-3		
	Number	Miles	Construction Cost	Number	Miles	Construction Cost
1.			76,410.70			199,018.71
2.	50			119		
3.				1		
4.		8.0			21.0	
5.			658,499.27			1,087,457.68
6.		2,428.1			4,567.7	
7.			475,539.59			1,186,743.59
8.	158			393		
9.	246			559		
10.	81			204		
11.			282,374.63			715,558.93
12.	39			91		
13.	7			16		
14.	133			341		
	714	2,436.1	1,492,824.19	1,724	4,588.7	3,188,778.91
15.			569,968.69			1,582,723.60
16.	112			269		
17.				3		
18.	11			18		
	123		569,968.69	290		1,582,723.60
19.			2,315,875.53			5,468,831.62
20.		5,546.0			12,426.7	
21.		44.0			222.8	
22.	915			3,220		
23.	306			2,616		
24.			82,690.59			245,881.68
25.		2.5			10.3	
26.				15		
27.	58			97		
	1,279	5,592.5	2,398,566.12	5,948	12,659.8	5,714,713.30
28.			447,678.19			773,944.88
29.		2,906.8	6,976,658.54		8,183.1	16,474,292.02
30.		3,384.5	289,627.83		7,355.6	830,602.42
		6,291.3	7,713,964.56		15,538.7	18,078,839.32
	2,116	14,319.9	12,175,323.56	7,962	32,787.2	28,565,055.13

TIMBER RESOURCES IN ARIZONA AND NEW MEXICO

Forest area in Arizona and New Mexico may be divided into two types:

1. The sawtimber area, containing ponderosa pine, Douglas fir, white fir and other species suitable for logging operations. This area is generally found above 7,000 ft. elevation and up to 11,500 ft. (timberline). It receives precipitation averaging 19 inches or better, annually. (In general, precipitation increases with elevation).

2. The woodland area, containing pinon, juniper, oak and the like. Generally between the 5,000 ft. and 7,000 ft. elevations, where precipitation is from 12 to 18 inches annually.

FOREST AREA IN REGION 3
(In acres. Includes all ownerships)

	Sawtimber Area	Woodland Area	Total Forest Area
ARIZONA	4,638,000	14,900,000	19,538,000
NEW MEXICO	6,101,000	13,900,000	20,001,000
REGION 3	10,739,000	28,800,000	39,539,000

A considerable part of the sawtimber area in Arizona and New Mexico is inaccessible or too scattered for logging purposes or withdrawn for purposes other than timber production. This part is classed as "non-commercial." The part which can be used for timber production is called the "commercial" sawtimber area, and according to present ideas this area is all that will be available for future production of timber.

COMMERCIAL SAWTIMBER AREA AND VOLUME

	Area (Acres)	Volume (M ft BM)
ARIZONA		
National forests	2,058,000	11,550,000
Indian reservations	686,000	4,467,000
Other Federal	-------	-------
State	30,000	105,000
Total, Federal and State	2,774,000	16,122,000
Private	41,000	148,000
Grand Total	2,815,000	16,270,000
NEW MEXICO		
National forests	2,020,000	5,610,000
Indian reservations	345,000	653,000
Other Federal	40,000	142,000
State	149,000	407,000
Total, Federal and State	2,554,000	6,812,000
Private	911,000	1,659,000
Grand Total	3,465,000	8,471,000

The commercial sawtimber area may be divided as follows (by acres):

	Virgin	Cut-over	Total
ARIZONA	1,969,000	846,000	2,815,000
NEW MEXICO	1,834,000	1,631,000	3,465,000

The cut-over land varies in its condition and consequently in its ability to produce future timber crops. For the Region, it varies about as follows:

	Acres
1. Denuded lands with only a light stand of seedlings & saplings - -	424,000
2. Land fairly stocked with seedlings and saplings - - - - - - - - -	495,000
3. Land with pole timber (trees between 4 and 12 inches D.B.H.) - - -	598,000
4. Selectively-cut land such as that on publicly owned areas - - - -	960,000
	2,477,000

It is only from such lands as the last (No. 4) that an early second cut of timber will be obtainable.

(NOTE: Tables used above and on the preceding page are based on preliminary data for the Reappraisal Report of the U.S. Forest Service).

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NUMBER OF TREE SPECIES IN REGION 3

According to U. S. Department of Agriculture, Misc. Circular No. 92, "Check List of the Forest Trees of the United States" there are 131 species of trees in Region 3.

Of these 131 species, four make up 98% of volume of the sawtimber stand. Ponderosa pine (Pinus ponderosa) makes up 82% of the volume; Douglas fir (Pseudotsuga taxifolia) makes up 10% of the volume; White fir (Abies concolor) makes up 3% of the volume; Engelmann spruce (Picea engelmannii) makes up 3% of the volume; Mexican white pine (Pinus strobiformis), Corkbark fir (Abies Arizonica), limber pine (Pinus flexilis), etc., making up the remainder of the volume.

FUEL VALUE OF WOOD

(Local species and typical others for comparison)

Approximate equivalents of one ton (2,000 pounds) of coal in terms of one cord of 128 cubic feet containing 80 cubic feet of solid wood:

One cord of	One and one-half cords of	Two cords of
Oaks	Soft maple	Cedars
Locusts	Sycamore	Cypress (Cupressus)
Hard maple	Mesquite tops	Cottonwoods
Ashes	Douglas fir	Aspen
Hickory	Southern pines	Other pines
Mesquite roots	Hemlocks	
	Larch	

NOTE: Of all American species of wood, mesquite is one of the few in which the root-wood is of higher specific gravity than above-ground wood. It pays to use root-wood for fuel and the grubbing will improve many of our ranges.

TIMBER CUT FROM THE NATIONAL FORESTS

Fiscal Year 1945

(The figures below are in M ft. B.M., which equals 1,000 board feet).

Forest	Commercial Sales	Cost Sales	Exchange	Total Cut	Total Value	Amount Free Use
Apache	24,641	17	-	24,658	74,989	477
Coconino	41,584	63	786	42,433	151,355	947
Coronado	827	3	-	830	1,942	1,006
Crook	358	9	-	367	620	143
Kaibab	3,843	32	-	3,875	11,778	299
Prescott	1,166	10	-	1,176	3,390	439
Sitgreaves	30,894	23	1,294	32,211	112,584	727
Tonto	3,066	15	-	3,081	10,588	1,266
ARIZONA	106,379	172	2,080	108,631	367,246	5,304
Apache	5,012	4	1,806	6,822	26,061	548
Carson	3,058	693	382	4,133	11,099	8,761
Cibola	4,577	82	112	4,771	13,457	2,145
Coronado	-	-	-	-	-	42
Gila	3,354	30	465	3,849	10,740	544
Lincoln	3,954	79	954	4,987	14,944	1,631
Santa Fe	16,729	295	524	17,548	80,757	2,856
NEW MEXICO	36,684	1,183	4,243	42,110	157,058	16,527
REGION 3	143,063	1,355	6,323	150,741	524,304	21,831

Cumulative Increment of Ponderosa Pine In Different Periods after Cutting
(Data collected and compiled by Southwestern Forest and Range Exp. Station)

Residual Volume Ft. b.m.	Years After Cutting 5 Ft. B.M.	10 Ft. B.M.	15 Ft. B.M.	15 Percent	20 Ft. B.M.	25 Ft. B.M.	30 Ft. B.M.
200	50	145	200	7.3	320	420	520
600	100	250	390	4.3	520	670	800
1,000	165	325	495	3.3	680	870	1,030
2,000	260	515	805	2.7	1,090	1,340	1,610
3,000	350	700	1,125	2.5	1,550	1,825	2,230
4,000	460	900	1,410	2.4	1,910	2,430	2,900
5,000	540	1,050	1,640	2.2	2,240	2,800	3,350
6,000	620	1,220	1,850	2.0	2,550	3,250	3,875
7,000	670	1,350	2,070	2.0	2,800	3,550	4,250
8,000	735	1,480	2,250	1.9	3,050	3,950	4,650
9,000	775	1,550	2,400	1.8	3,200	4,050	4,700
10,000	800	1,650	2,500	1.7	3,250	4,000	4,800

(NOTE: Increment volumes in lower portion of table are subject to considerable error due to too few plots. Volumes beyond 20 years were obtained by extending curve.)

TOTAL CUT SAWTIMBER BY STATES

Data from Census (Calendar Year).
(All Ownerships)

(The figures below are in M ft. B.M., which equals 1,000 board feet)

Year	Number Mills Reporting: Arizona	Number Mills Reporting: New Mexico	Total Cut: Arizona	Total Cut: New Mexico	Total Cut: Arizona and New Mexico
1929	31	78	175,000	148,000	323,000
1930	26	76	95,000	143,000	238,000
1931	26	57	85,000	58,000	143,000
1932	22	52	58,000	72,000	130,000
1933	28	55	90,000	89,000	179,000
1934	34	74	73,000	101,000	174,000
1935	29	79	98,716	126,220	224,936
1936	36	87	123,411	140,840	264,251
1937	39	105	123,041	164,446	287,487
1938	37	94	118,200	125,176	243,376
1939	42	98	119,206	106,227	225,433
1940	41	100	128,776	112,786	241,562
1941	42	119	130,567	114,612	245,179
1942	38	138	143,286	122,958	266,244
1943	44	118	151,547	109,099	260,646
1944	47	136	172,198	105,348	277,546

The sawtimber forests of Arizona and New Mexico have supplied sawtimber for the production of approximately nine and one quarter billion board feet of sawn products during the period 1879 to 1945 inclusive.

TOTAL CUTS FROM NATIONAL FORESTS

All classes of products converted to M ft. All classes of Forest Sales.

Calendar Year

Year	S-22: Arizona	S-22: New Mexico	Sales & Exchange: Arizona	Sales & Exchange: N. Mex.	Sales & Exchange: Total Arizona & New Mexico	Sales & Exchange: Average Price per M ft	Free Use: Arizona	Free Use: New Mexico	Free Use: Total
1929	261	595	143,575	33,161	176,736	$2.49	7,337	10,614	17,951
1930	269	907	85,476	36,194	121,670	2.33	8,670	15,818	24,488
1931	257	953	80,862	14,865	95,727	2.34	10,342	22,503	32,845
1932	371	827	57,206	10,714	67,920	2.31	12,876	27,962	40,838
1933	284	813	75,998	14,196	90,194	2.38	14,623*	29,255	43,878
1934	508	774	34,944	12,826	47,770	2.35	14,568	23,485	38,053
1935	391	841	78,648	17,398	96,046	2.23	15,395	26,725	42,120
1936	484	936	91,670	34,912	126,582	2.34	13,593	22,253	35,846
1937	572	1,144	91,902	50,631	142,533	2.24	7,902	25,332	33,234
1938	519	1,055	69,334	36,763	106,097	2.19	8,117	25,452	33,569
1939	250	846	65,166	31,934	97,100	2.18	8,381	24,111	32,492
1940	274	964	74,360	40,120	114,480	2.30	8,976	28,674	37,650
1941	222	847	79,079	29,102	108,181	2.45	6,767	29,850	36,617
1942	238	865	74,795	44,325	119,120	2.48	6,575	20,588	27,163
1943	208	1,202	77,426	52,851	130,277	2.82	4,756	13,660	18,416
1944	282	1,134	113,269	40,544	153,813	3.40	4,970	13,565	18,535
1945	-	-	109,209	42,768	151,977	3.33	5,304	16,527	21,831

*Previous figures on "Free Use" are calendar year. Subsequent are fiscal year.

Handled under cooperative agreement (State timber) 7,683 M (C.Y. 1945)
Handled under cooperative agreement (Private timber) 3,736 M (C.Y. 1945)

STATUS OF CUTTING IN NEW MEXICO - 1944

Total cut (estimated) 96,000 M feet log scale

			%
National Forest	36,096	M feet	37.6
Indian Reservations	19,488	" "	20.3
State (handled by Forest Service)	6,240	" "	6.5
State (handled by State)	7,776	" "	8.1
Private (handled by Forest Service)	10,272	" "	10.7
Private (handled by Co. under cooperative agreement)	0		0.0
Private (some restrictions) railroad lands, timber rights, etc.	3,264	" "	3.4
Private (no restrictions except state law)	12,864	" "	13.4
TOTAL	96,000	" "	100.0

Total cut from private lands 26,400 " "
Regulated cut - - - - - 13,543 M - 51.3%
Unregulated cut - - - - - 12,857 M - 48.7

STATUS OF CUTTING IN ARIZONA - 1944

Total cut (estimated) 157,000 M feet log scale

National Forests	114,139	M feet	72.7
Indian Reservations	41,291	" "	26.3
State (handled by Forest Service)	0	" "	0.0
Timber Rights (under T.R. agreement)	0	" "	0.0
Private (handled by Forest Service)	1,413	" "	.9
Private (no restrictions)	157	" "	.1
TOTAL	157,000	" "	100.0

STATUS OF CUTTING IN NEW MEXICO, 1943 and 1944

	Percent of Total	
	1943	1944
National Forests	42.5	37.6
Indian Reservations	24.4	20.3
State of New Mexico (F.S. Coop.)	5.7	6.5
State (other)	4.0	8.1
Private (F.S. Coop.)	12.9	10.7
Private (handled by company under coop. agreement)	-	-
Private (timber rights and railroad lands minor restrictions)	0.1	3.4
Private (no restrictions except State law)	10.4	13.4
TOTAL	100.0	100.0
Total Cut	99,000 M ft.	96,000 M ft.

COMPARATIVE PAINTABILITY OF DIFFERENT SPECIES OF WOODS

Group No.	Description of Group	Species
1	Woods on which paints of types A and B disintegrate slowly	Softwoods Cedars Southern cypress Redwood
2	Woods on which paints of type A disintegrate slowly but those of type B disintegrate somewhat more rapidly than they do on woods of group 1	Softwoods Northern white pine Sugar pine Western (Idaho) White pine
3	Woods on which paints of types A and B disintegrate more rapidly than they do on woods of group 1	Hardwoods Aspen Cottonwoods Yellow poplar Softwoods White fir Hemlock Lodgepole pine Ponderosa pine Engelmann spruce Sitka spruce
4	Woods on which paints of types A and B disintegrate more rapidly than they do on woods of Group 3	Hardwoods Beech Birch Maple Gums Softwoods Douglas fir Norway pine Southern yellow pine Western larch
5	Woods unsuitable for conventional house painting because wood filler is required to fill the pores properly.	All hardwoods with pores larger than those in birch, such as ash, chestnut, elm hickory, oak, walnut.

NOTE: Paints of type A are those that fail by checking and crumbling such as pure white lead paint; those of type B fail by cracking, curling, and flaking, such as paints containing zinc oxide mixed with other pigments.

COMPARATIVE DECAY RESISTANCE OF HEARTWOOD OF LOCAL AND FREQUENTLY-USED OUTSIDE SPECIES

(Applies only to heartwood, untreated. Sapwood of no species is durable under conditions favoring decay; i.e., in contact with soil, poorly-drained or aerated parts of buildings, bridges, etc.)

Durable Group

Cedars
Junipers
Black Locust
Osage Orange
Redwood
Southern cypress

Nearly as Durable Group

White oaks
Honey locust
Dense Douglas fir
Dense southern pine
Dense larch

High Intermediate Group

Cypress (Cupressus)
Douglas fir (unselected)
Southern pine (unselected)
Larch (unselected)

Low Intermediate Group

Red Oaks
Pines (other than southern)
Maple (hard and red)
Ashes
Hemlocks
Spruces

Nondurable Group

True firs (concolor, alpine, balsam, etc.)
Aspen
Cottonwood
Willows

NOTE: When used under decay-inducing conditions the woods in the last three groups should be treated with an approved preservative and in so treating sapwood all around is preferable.

SOME WOOD UTILIZATION FACTS

All other things being equal, that is, grade for grade:

1. Sapwood of any species is as strong when used as a beam or post and as stiff as the heartwood of that species.

2. Red (heartwood) hickory tool handles are as strong as white (sapwood) handles.

3. Timber cut from dead trees (free from decay) is as strong as that cut from live trees.

4. The harder the wood the higher its nail-holding power but the more easily it splits. Conversely, the softer the wood the lower its nail-holding power but the less easily it splits. Hence, use slimmer and more nails in hardwoods; larger and less nails in softwoods.

5. Good air-seasoned wood and good kiln-dried wood of the same species at the same moisture content are of equal strength.

6. From the principal property standpoints the oaks are classed commercially in two groups - white and red. Thus the three important southwestern species of oak are of approximately equal value and behavior in use: Arizona white oak (Q. arizonica); Emory oak (Q. emoryi), and Rocky mountain white oak (Q. utahensis).

7. Sapwood of no species is durable.

8. In untreated condition, with the same proportion of heartwood present, there is no difference in durability of round and split posts but splitting often changes the relative proportion by volume of sapwood and heartwood.

9. Generally the softer a wood the better it takes and holds paint.

10. In repainting buildings use the paint of the same manufacturer as was originally used since coats of paints of different formula usually are not compatible.

11. Uneven coatings on wood cause warping.

12. Of all the lumber called or sold under a commercial or trade name including the words, "white pine," that cut from only the following species is true white pine:

    Northern white pine (P. strobus)
    Western (Idaho) white pine (P. monticola)
    Sugar pine (P. lambertiana)
    Limber pine (P. flexilis)
    Whitebark pine (P. albicaulis)
    Mexican white pine (P. strobiformis)

    All others belong to the hard or southern yellow pine group (i.e., longleaf, shortleaf, loblolly, slash, etc.); or to the intermediate, red, or nut group (i.e., Norway, lodgepole, jack, ponderosa, pinon, etc.).

WATER YIELD

From Small Mountain Watershed - Central Arizona - Open Forest Cover - Elevation 5,000 to 6,000

Year	Season	Rain Inches	Run-off Cubic Feet	Cubic Feet Per Acre	Total rain before run-off began	Lag in days before run-off began	Percent run-off to rainfall	Acre-feet per inch of rain
1934	Summer	7.54	220,770	315	5.17	60	1.0	0.7
1934	Winter	19.93	17,959,000	25,700	1.00	1	35.5	21.0
1935	Summer	7.78	25,895	37	3.30	30	0.1	0.08
1935	Winter	16.64	13,683,403	19,600	1.11	15	32.3	19.0

Water measurements recorded by weirs at lower extremity of watershed.

SOIL LOSS, SURFACE RUN-OFF, AND PERCOLATION

As Affected by Different Soil Types and Vegetation
(From records of Southwestern Forest and Range Experiment Station)

In 1938 a battery of seven pairs of 1,000 square inch lysimeters was installed at the Sierra Ancha Experimental Forest. These lysimeters contain undisturbed soil blocks representing seven different important soil types from the Tonto National Forest. One of each pair of lysimeters is grass covered and one is bare of vegetation. Results for 6 years are summarized in the following table:

Soil types	Soil loss (cu. in.)		Surface run-off in percent of Precipitation		Percolation in percent of precipitation	
	Bare	Vegetated	Bare	Vegetated	Bare	Vegetated
Gray schist	302	91	52.3%	38.9%	6.2%	12.2%
Volcanic malpais	721	208	14.9%	15.4%	27.2%	11.5%
Conglomerate	512	87	19.1%	15.0%	24.0%	20.4%
Red shale	661	17	25.9%	2.0%	19.5%	26.2%
Sandstone	586	29	30.2%	5.8%	18.5%	23.2%
Diabase	341	16	27.7%	6.7%	19.0%	22.4%
Quartzite	322	7	31.5%	3.2%	8.9%	24.6%
Total	3,445	455	28.8%	12.4%	17.6%	20.1%

Facts indicated by the data: On the average for all soil types the amount of eroded material from the bare plots was seven and one-half times as great as that from the vegetated plots. Surface run-off, like erosion, was greatest on all the bare soil types with the exception of the volcanic malpais. On the average, percolation was greater on the vegetated plots. Both surface run-off and erosion per unit of precipitation were greater during the summer period, while most of the percolation occurred during the winter.

ESTIMATED WATER YIELD BY PRINCIPAL DRAINAGES

(The basis for these estimates is a correlation of stream-gaging and precipitation records, adjusted to elevations, vegetative association and other factors affecting run-off. The precipitation data were obtained from Weather records and state isohyetal compilations and the available stream-gaging records used for certain basic flow determinations were obtained from U.S.G.S. water supply papers.)

Santa Fe National Forest

Drainage Name	Gross Area of Basin In Sq. Miles (Santa Fe Forest)	Annual Water Yield-Acre Ft. Per Year	Per Sq. Mi.
Mora River*	132	42,000	317
Gallinas River	57	20,000	346
Tecolote Creek	46	8,000	179
El Rito Creek	30	3,500	118
Canyon Blanco	74	4,500	60
Cow Creek	121	26,500	220
Pecos River	306	108,000	353
Rio Galisteo	74	6,200	85
Santa Fe Creek	35	8,500	242
Pojoaque Creek	60	13,100	218
Santa Cruz & Truchas	117	36,000	308
Direct Tributaries from West Side**	209	17,600	84
Jemez River	223	40,400	181
Rio Puerco	102	12,100	119
Chama River	336	43,500	129
Gallina River	218	21,600	100
Largo Creek (San Juan)	18	800	44
Total Santa Fe Forest	2,158	412,300	190

* Includes Rociada Tract and unacquired Mora Grant lands to Forest Boundary.
** Excluding Ramon Vigil Grant.

Baca Location is not included in estimates.

ESTIMATED WATER YIELD BY PRINCIPAL DRAINAGES

Gila National Forest

Drainage Name	Gross Area of Basin In Sq. Miles (Gila Forest)	Annual Water Yield - Acre Ft. Per Year	Per Sq. Mi.
Luera Mtns. and Y Canyon	155	4,100	26
Negrito Creek	185	8,100	44
San Francisco (Direct)	486	35,000	68
Sub (San Francisco)	671	43,100	62
Sacaton Creek	18	2,500	139
Mogollon Creek	110	17,100	155
West Fork, Gila	164	30,850	188
Middle Fork, Gila	364	35,500	98
Main Stem, Gila	728	35,700	49
Bear Creek	126	7,200	57
Sapillo Creek	176	9,750	55
Black Canyon	115	10,100	88
Diamond Creek	119	9,700	81
Mangas Wash (Burros)	82	2,100	26
Gila direct (Tillie-Hall Peak)	36	800	22
Gila direct (Burros)	178	4,100	23
Sub. T. (Gila River)	2,216	165,400	76
Mimbres	345	19,600	57
Rio Grande (Direct)	454	26,100	57
Sub. T. (Rio Grande)	799	45,700	57
Total Gila Forest	3,841	258,300	67

Carson National Forest

Latir Creek	17	5,500	325
Red River	171	62,000	364
San Cristobal	29	3,200	112
Rio Hondo	38	19,300	507
Taos Creek*	123	32,200	264
Little Rio Grande*	145	38,300	264
Embudo (Pueblo Cr.)	230	65,000	284
Coyote Creek (Can)#	14	4,500	320
Los Pinos-San Antone	204	50,000	248
Brazos**	20	8,000	392
Aguage Arroyo ##	74	4,600	62
Las Tusas	186	22,000	120
Vallecitos*	220	37,000	170
El Rito Creek	65	13,500	207
Canjilon Creek*	151	14,500	101
Rio Nutrias**	17	3,500	212
Rio Cebolla**	54	4,000	76
Chama (direct)	38	600	16
San Juan (Jicar.)	249	15,600	63
Total Carson Forest***	2,045	403,300	197

* Includes non-National Forest area of Watershed

** National Forest drainage only

*** Totals include non-forest areas as listed above

\# Does not include Santa Fe area to be administered by Carson

Does not include Taos Resettlement Area

ESTIMATED WATER YIELD BY PRINCIPAL DRAINAGES

Apache National Forest

Drainage Name	Gross Area of Basin: In Sq. Miles (Apache Forest)	Annual Water Yield - Acre Ft. Per Year	Per Sq. Mi.
Mineral Creek	52	12,200	232
Canero Creek	37	8,300	224
Little Colorado (Direct)	81	33,700	414
So. Fork Little Colorado	55	14,300	260
Nutrioso Creek	148	17,300	117
Coyote Creek*	80	5,500	69
Agua Fria Creek*	127	6,400	51
Largo Creek*	127	13,700	108
(Sub-Total Little Colorado)	707	111,400	158
Mangas Creek*	61	8,100	133
Alamacito-Patterson*	74	8,400	114
T. H. Canyon - Cottonwood*	45	6,100	135
(Sub-Total Interior Plains)	180	22,600	126
Tularosa Creek	324	23,800	74
Apache Creek	137	10,900	79
Saliz-Brushy Creek	75	4,200	56
Pueblo Creek	84	5,800	69
Upper "Frisco" Direct	162	24,200	149
Centerfire - Karruth Creek	149	10,800	73
Lower "Frisco" direct	214	11,000	51
(Sub-Total San Francisco River)**	1,145	90,700	80
Campbell & Dry Blue	112	24,700	220
Blue River (Direct)	184	23,800	129
(Sub-Total Blue River)	296	48,500	164
North Fork Black River	49	21,800	445
East Fork Black River	63	25,500	405
Black River (Direct)	244	101,600	415
(Sub-Total Black River)	356	148,900	418
Total Apache Forest	2,684	422,100	157

* Principally flood waters and seasonal flow
** Exclusive of Negrito Creek above Apache-Gila boundary

NOTE: Water yield estimates for other Forests of Region 3 are not yet available.

Total Area Available for Livestock
(Includes National Forest Range)

	Arizona	New Mexico	TOTAL
Total Land Area	72,838,400	78,401,920	151,240,320
Barren and Unaccessible	8,396,803	1,266,940	9,663,743
Other Non-grazable	1,853,855	3,059,800	4,913,655
Total Non-grazable	10,250,658	4,326,740	14,577,398
Total Gross Grazable	62,587,742	74,075,180	136,662,922
Closed to Grazing	782,169	270,658	1,052,827
Total Net Area Available for Livestock - Acres	61,805,573	73,804,522	135,610,095
Percent	84.9	94.1	89.5

Livestock Actually Grazed Under Permit On National Forests

ARIZONA

C. Y.	Cattle	Horses	Sheep	Goats	Swine	Exempt Livestock		
1926	227,198	2,539	257,575	1,140	271	21,551		
1927	207,517	2,631	337,786	1,796	268	21,097		
1928	186,277	2,231	286,231	1,766	460	19,495		
1929	181,125	1,951	351,221	1,397	455	18,631		
1930	172,084	1,533	352,368	426	272	11,073		
1931	178,900	1,427	331,329	3,345	196	10,778		
1932	181,338	1,391	262,652	1,786	157	10,460		
1933	185,711	1,312	361,013	0	115	10,824		
1934	188,231	1,018	245,189	10	80	10,629		
1935	181,363	912	252,117	0	55	10,398		
1936	180,046	1,074	270,029	600	50	11,273		
1937	182,421	1,014	242,182	600	42	11,261		
1938	183,396	1,042	223,993	600	45	11,287		
1939	171,778	1,198	199,086	800	45	10,087		
1940	149,896	1,397	155,068	800	45	9,335		
	C&H		S&G			C&H	S&G	Swine
*1941	158,377		142,444		30	8,827	10	10
*1942	157,500		143,948		45	8,504	10	9
*1943	158,640		135,560		45	8,550	-	-
*1944	153,217		113,504		35	8,280	6	9
*1945	147,726		104,408		25	7,609	76	-

*C&H and S&G figures combined in annual grazing report.

Livestock Actually Grazed Under Permit on National Forests

NEW MEXICO

C.Y.	Cattle	Horses	Sheep	Goats	Swine	Exempt Livestock
1926	91,364	3,071	197,931	10,390	180	13,463
1927	89,909	3,350	220,916	11,696	145	11,190
1928	81,065	3,446	227,651	10,491	168	12,157
1929	81,044	3,381	244,509	10,427	134	11,024
1930	82,049	2,964	225,577	10,526	84	11,044
1931	86,197	2,651	217,044	9,592	102	10,374
1932	88,669	2,148	211,156	10,850	104	11,581
1933	91,747	1,704	191,617	10,225	60	11,488
1934	92,923	1,548	200,156	8,082	19	11,467
1935	89,174	1,755	179,410	8,639	15	7,641
1936	86,636	1,894	189,446	6,988	0	10,425
1937	86,776	1,841	164,709	6,638	0	10,473
1938	84,136	1,869	167,524	6,417	0	10,016
1939	89,120	2,028	168,230	4,969	0	11,766
1940	89,105	1,720	157,601	5,163	0	12,373
	C&H		S&G			C&H / S&G
*1941	86,381		168,529		0	9,344 / 1,474
*1942	87,519		164,952		51	8,631 / 1,369
*1943	87,608		150,635		209	9,388 / 1,168
*1944	89,941		144,060		-	8,838 / 1,186
*1945	83,571		137,767		-	8,798 / 1,605

*C&H and S&G figures combined in annual grazing reports.

Estimates of Game on National Forests

Fur-Bearing Animals

	Year	Badger	Beaver	Fox	Mink	Muskrat	Raccoon	Ringtail Cat	Skunk	Weasel
Arizona	1936	4,075	940	21,450	55	*	6,535	5,775	44,800	2,360
	1937	4,110	930	20,550	70		6,840	6,110	43,200	2,210
	1938	3,640	960	20,370	50		6,950	6,730	42,500	2,090
	1939	3,000	931	20,400	20		6,200	7,200	41,700	2,200
	1940	3,300	957	21,300	300		7,300	8,600	35,500	2,200
	1941	3,200	950	21,600	300		7,500	8,600	34,600	2,700
	1942	3,200	1,117	19,860	60	1,500	8,300	7,800	35,600	2,700
	1943	3,100	1,195	20,630	55	2,340	7,720	*	40,460	1,235
	1944	3,085	804	19,165	28	1,298	7,055	900	38,750	1,487
	1945	2,950	1,630	19,351	54	2,295	7,516	1,000	35,665	1,147
New Mex.	1936	2,650	1,720	6,935	495	*	1,545	2,000	28,365	1,630
	1937	2,710	1,770	6,990			1,700	1,850	29,480	1,680
	1938	2,940	1,810	6,810	410		1,760	2,120	28,430	4,240
	1939	3,090	1,860	6,900	400		1,700	2,250	27,000	4,200
	1940	3,400	2,322	6,700	300		1,800	2,500	35,300	3,000
	1941	3,400	2,522	6,900	500		1,800	2,700	28,100	6,300
	1942	3,310	2,770	7,200	500	1,830	1,800	2,600	27,200	6,200
	1943	3,790	2,835	7,680	470	2,090	1,810	*	28,400	6,560
	1944	3,810	3,505	7,715	470	2,630	1,818	410	27,270	7,710
	1945	3,927	3,227	8,200	475	1,630	1,733	312	29,753	8,030
Total Region 3	1936	6,725	2,660	28,385	550		8,080	7,775	73,165	3,990
	1937	6,820	2,700	27,540	600		8,540	7,860	72,680	3,890
	1938	6,580	2,770	27,180	460		8,710	8,850	70,930	6,330
	1939	6,090	2,791	27,300	430		7,900	9,450	68,700	6,400
	1940	6,700	3,279	28,000	600		9,100	11,100	70,800	5,200
	1941	6,600	3,472	28,500	800		9,300	11,300	62,700	9,000
	1942	6,510	3,887	27,060	560	3,330	10,100	10,400	62,800	8,900
	1943	6,890	4,030	28,310	525	4,430	9,530	*	68,860	7,795
	1944	6,895	4,309	26,880	498	3,928	8,873	1,310	66,020	9,197
	1945	6,877	4,857	27,551	529	3,925	9,249	1,312	65,418	9,177

*Data not available

Estimates of Game on National Forests

Game Animals

	Year	Antelope	Black or Brown Bear	Silver Tip or Grzly. Bear	Deer	Elk	Mtn. Sheep	Peccary or Javelina	Squirrel	Turkey
Arizona	1936	5040	820	-	81,090	4605	175	5405	54,810	10,290
	1937	5490	840	-	73,980	4400	200	5810	57,900	10,620
	1938	5320	865	1	70,020	4140	210	6140	43,590	9,990
	1939	5100	860	1	67,780	4290	220	7100	25,400	8,990
	1940	5400	970	-	62,500	4340	215	*	*	8,370
	1941	5900	950	-	61,700	4300	210	7100	298,330	8,760
	1942	5500	1020	-	64,995	4100	200	8400	*	9,400
	1943	5235	960	-	61,995	4095	190	8700	*	*
	1944	5000	1021	-	61,107	3897	166	10355	*	11,570
	1945	4691	872	-	63,762	4190	145	11202	*	11,466
New Mex.	1936	1040	1350	5	86,460	855	115	-	40,450	14,400
	1937	1180	1320	4	76,400	880	55	400	38,400	12,500
	1938	1460	1330	3	72,200	965	90	300	38,800	13,120
	1939	1550	1324	2	69,130	1040	70	400	36,500	12,350
	1940	1700	1430	2	69,300	1060	55	*	*	11,100
	1941	2100	1400	2	68,800	1200	60	400	340,500	10,810
	1942	2300	1342	-	68,100	1300	60	500	*	11,000
	1943	2395	1412	-	68,250	1497	90	500	*	*
	1944	2506	1493	-	67,270	1572	93	500	*	10,253
	1945	2628	1550	-	67,072	1589	104	1005	*	10,645
Total Region 3	1936	6080	2170	5	167,550	5460	290	5405	95,260	24,690
	1937	6670	2160	4	150,380	5280	255	6210	96,300	23,120
	1938	6780	2195	4	142,220	5105	300	6440	82,390	23,110
	1939	6650	2184	3	136,910	5330	290	7500	61,900	21,340
	1940	7100	2400	2	131,800	5400	270	*	*	19,470
	1941	8000	2350	2	130,500	5500	270	7500	638,830	19,570
	1942	7800	2362	-	133,095	5400	260	8900	*	20,400
	1943	7630	2372	-	130,245	5592	280	9200	*	*
	1944	7506	2514	-	128,377	5469	259	10855	*	21,823
	1945	7319	2422	-	130,834	5779	249	12207	*	22,111

*Data not available

Estimates of Game on National Forests

Predatory Animals

	Year	Bobcat or Lynx	Coyotes	Mt. Lions	Wolf
Arizona	1937	12,340	20,560	490	12
	1938	11,560	21,530	500	25
	1939	10,090	17,875	460	22
	1940	10,000	21,900	480	13
	1941	11,580	23,500	490	15
	1942	10,870	28,500	455	21
	1943	10,940	28,090	475	8
	1944	11,060	27,350	463	16
	1945	11,083	25,950	429	9
New Mexico	1937	6,680	12,040	375	16
	1938	6,690	12,040	375	30
	1939	7,980	14,050	442	22
	1940	6,700	11,500	383	18
	1941	6,590	12,180	342	24
	1942	10,440	13,100	307	11
	1943	7,650	13,930	311	5
	1944	8,195	15,135	327	7
	1945	8,393	15,740	296	14

Game Animals Killed By Man

	Year	Antelope	Bear	Deer	Elk	Peccary	Squirrel	Wild Turkey
Arizona	1937	-	107	3,195	66	10	455	660
	1938	-	44	3,045	81	*	215	600
	1939	6	74	2,750	82	*	260	512
	1940	3	97	2,943	91	*	200	510
	1941	294	71	3,240	152	*	170	715
	1942	165	56	3,340	279	120	*	510
	1943	336	71	3,507	445	130	*	*
	1944	1	81	3,887	-	207	*	431
	1945	-	114	3,294	-	258	*	6
New Mexico	1937	-	94	2,315	11	*	3,840	832
	1938	70	96	2,545	10	*	2,720	945
	1939	46	96	3,042	19	*	2,200	646
	1940	55	100	4,050	25	*	2,600	560
	1941	122	97	4,403	31	*	2,350	629
	1942	123	54	3,428	51	10	*	370
	1943	135	50	5,157	135	10	*	*
	1944	140	119	3,856	51	10	*	623
	1945	163	129	3,564	37	10	*	624
Total Region 3	1937	-	201	5,110	77	35	4,295	1,492
	1938	70	145	5,510	91	*	2,935	1,545
	1939	52	170	5,792	101	*	2,460	1,158
	1940	58	197	6,993	116	*	2,800	1,070
	1941	416	168	7,643	183	*	2,520	1,344
	1942	288	110	6,768	330	130	*	880
	1943	471	121	8,664	580	140	*	*
	1944	141	200	7,743	51	217	*	1,054
	1945	163	243	6,858	37	268	*	630

*Data not available

GOVERNMENT OWNED WILDLIFE AND RANGE USE IMPROVEMENTS - JUNE 30, 1945

ARIZONA

Forest	Range Use Improvements: Fence & Corrals Miles	Stock Drive-ways Miles	Water Develop-ment Number	Artificial Reseeding Acres	Cost	Wildlife Use Improvements: Game Refuge Fences Miles	Fish Rearing Ponds Number	Stream & Lake Improv. Number	Cost
Apache	544.4	45.0	76	-	$ 184,663.23	3.5	5	16	$ 59,991.26
Coconino	1,086.8	-	329	-	466,156.74	-	-	7	40,095.54
Coronado	1,270.7	-	570	-	600,318.72	-	-	1	15,328.27
Crook	1,056.7	-	348	2,300	494,792.71	-	-	8	18,040.63
Kaibab	535.3	5.5	181	-	318,914.10	-	-	1	3,670.28
Prescott	952.7	7.5	293	-	512,213.13	4.3	-	-	3,843.54
Sitgreaves	402.5	-	70	-	153,737.36	-	10	1	4,717.31
Tonto	910.6	120.8	384	10	338,086.18	-	-	5	17,504.26
Total Forests	6,759.7	178.8	2,251	2,310	3,068,882.17	7.8	15	39	163,191.09
Swn. Forest & Range Exp. Sta.	121.0	-	54	-	84,073.92	-	-	-	-
GRAND TOTAL ARIZONA	6,880.7	178.8	2,305	2,310	$3,152,956.09	7.8	15	39	$ 163,191.09

NEW MEXICO

Forest	Fence & Corrals Miles	Stock Drive-ways Miles	Water Develop-ment Number	Artificial Reseeding Acres	Cost	Game Refuge Fences Miles	Fish Rearing Ponds Number	Stream & Lake Improv. Number	Cost
Apache	574.7	-	116	-	$ 209,962.35	-	-	-	-
Carson	449.2	-	96	-	192,566.29	-	-	12	25,192.84
Cibola	1,392.4	-	193	-	485,257.55	-	-	3	11,627.52
Coronado	70.5	-	41	-	27,899.08	-	-	-	-
Gila	1,383.2	-	203	261	599,882.69	2.5	-	12	14,207.64
Lincoln	955.6	-	234	45	550,844.46	-	-	-	7,591.16
Santa Fe	588.4	44.0	25	-	191,668.71	-	-	31	24,071.43
Total Forests	5,414.0	44.0	908	306	$2,258,081.13	2.5	-	58	82,690.59
Swn. Forest & Range Exp. Sta.	132.0	-	7	-	57,794.40	-	-	-	-
GRAND TOTAL, N. MEX.	5,546.0	44.0	915	306	2,315,875.53	2.5	-	58	82,690.59
TOTAL FORESTS	12,173.7	222.8	3,159	2,616	5,326,963.30	10.3	15	97	245,881.68
TOTAL SOUTHWESTERN	253.0	-	61	-	141,868.32	-	-	-	-
GRAND TOTAL - REGION 3	12,426.7	222.8	3,220	2,616	$5,468,831.62	10.3	15	97	$ 245,881.68

LAND DISTRIBUTION STATISTICS

Distribution of Lands in Arizona	Area Acres	% To Total Area of State
Federal		
Indian Reservations	19,224,717	26.40
Grazing Districts and Public Domain	9,011,697	12.37
National Parks and National Monuments	2,394,568	3.29
Soil Conservation Service	10,454	.01
Santa Rita Experimental Range	52,604	.07
Southwestern Forest & Range Experiment Station	245	-
National Forests (net)*	11,420,278	15.68
Other Federal Lands	5,823,950	8.00
Total Federally Owned or Managed	47,938,513	65.82
State		
Total State Owned	8,356,497	11.47
Private		
Private in farms and ranches	13,964,572	19.17
Private - other	2,577,927	3.54
Total Privately Owned	16,542,499	
Total Area of State	72,837,509	100.00

Distribution of Lands in New Mexico		
Federal		
Indian Reservations	7,153,109	9.11
Grazing Districts and Public Domain	14,612,786	18.62
National Parksand National Monuments	163,434	.21
Jornada Experimental Range	189,940	.24
National Forests (net)*	8,666,014	11.04
Soil Conservation Service	566,177	.72
Other Federal Lands	1,371,725	1.75
Total Federally Owned or Managed	32,723,185	41.69
State		
Total State Owned	12,700,968	16.18
Private		
Private in Farms and Ranches	29,592,372	37.70
Private - other	3,477,882	4.43
Total Privately Owned	33,070,254	
Total Area of State	78,494,407	100.00
Total Area of Region 3	151,331,916	

*Latest available figures

The net forest area in Arizona and New Mexico totals:	20,086,292
The gross forest area in Arizona	12,105,614
The gross forest area in New Mexico	9,900,397
TOTAL	22,006,011

Special Uses - Fiscal Year - 1941

In Force 6/30/41 *

	Free	Charge	Total
Arizona	3,763	1,435	5,198
New Mexico	1,668	770	2,438
Region 3	5,431	2,205	7,636

Land Exchange

Total Number consummated Cases to June 30, 1945, Inc.

Offered Lands - Total Consummated		Area Accepted	Estimated Value
Arizona	74	232,835	$ 538,971
New Mexico	69	284,581	800,654
Total	143	517,416	1,339,625

Selected Lands - Total Consummated

State	Area	Land Value	M. Ft. B. M.	Timber Value
Arizona	28,250	$ 73,134	158,510	$ 381,513
New Mexico	22,932	37,744	271,798	612,579
Region Total	51,182	110,878	430,308	994,092

NATIONAL FOREST AREAS

Fiscal Year 1945

Arizona	Net Area	New Mexico	Net Area
Apache	679,432	Apache	889,698
Coconino	1,744,306	Carson	1,115,992
Coronado	1,316,183	Cibola	1,707,153
Crook	1,422,654	Coronado	124,988
Kaibab	1,778,967	Gila	2,395,794
Prescott	1,265,403	Lincoln	1,178,670
Sitgreaves	802,766	Santa Fe	1,253,719
Tonto	2,410,567		
Total Arizona	11,420,278	Total N. M.	8,666,014

Net area of the 158 National Forests in the U. S. 177,987,297 Acres (F.Y. 1945)

*No report submitted for 1945

STATEMENT OF AREAS UNDER FOREST SERVICE ADMINISTRATION BY COUNTIES

As of June 30, 1945

State and County	National Forest or Experimental Area	Total Area of County Involving N.F. Lands (1940 Census)	Area of County Within N.F. Boundary	Areas not under F.S. Administration	Acreage under F.S. Administration	Percent of County Area under F. S. Admnstrn.
ARIZONA						
Apache	Apache-Sitgreaves	7,151,360	515,994	29,163	486,831	6.81
Cochise	Coronado-Crook	4,003,840	529,015	24,563	504,452	12.60
Coconino	Coconino-Kaibab-Prescott-Sitgreaves	11,886,720	3,584,182	200,994	3,383,188	28.46
Gila	Crook-Tonto	3,040,000	1,724,874	48,761	1,676,113	55.13
Graham	Crook	2,950,400	399,338	2,063	397,275	13.47
Greenlee	Apache-Crook	1,199,360	758,793	9,864	748,929	62.44
Maricopa	Crook-Tonto	5,907,840	696,073	4,272	691,801	11.71
Mohave	Kaibab	8,486,400	28,219	160	28,059	.33
Navajo	Sitgreaves	6,343,040	544,728	73,497	471,231	7.43
Pima	Coronado-Santa Rita Exp. For.-S.W.Exp. For.	5,914,240	448,873	11,349	437,524	7.39
Pinal	Coronado-Crook-Tonto	3,441,920	228,805	6,071	222,734	6.47
Santa Cruz	Coronado	797,440	448,497	23,172	425,325	53.34
Yavapai	Coconino-Kaibab-Prescott-Tonto	5,178,240	2,251,627	251,962	1,999,665	38.62
STATE TOTAL		66,300,800	12,159,018	685,891	11,473,127	

STATEMENT OF AREAS UNDER FOREST SERVICE ADMINISTRATION BY COUNTIES

As of June 30, 1945

State and County	National Forest or Experimental Area	Total Area of County Involving N.F. Lands (1940 Census)	Area of County Within N.F. Boundary	Area not under F.S. Administration	Acreage Under F.S. Administration	Percent of County Area under F. S. Admnstrn.
NEW MEXICO						
Bernalillo	Cibola	744,320	89,925	8,825	81,100	10.89
Catron	Apache-Cibola-Gila	4,414,720	2,407,930	173,176	2,234,754	50.62
Chavez	Lincoln	3,900,160	41,497	1,359	40,138	1.03
Colfax	Carson	2,409,600	7,680	1,387	6,293	.26
Dona Ana	Jornada Exp. R.	2,434,560	193,482	3,542	189,940	7.80
Eddy	Lincoln	2,664,320	139,172	4,433	134,739	5.06
Grant	Gila-Ft.Bayard Res.	2,540,800	916,012	20,112	895,900	35.26
Hidalgo	Coronado-Gila	2,206,080	136,031	3,390	132,641	6.01
Lincoln	Lincoln	3,109,760	507,575	66,850	440,725	14.17
McKinley	Cibola	3,491,840	262,129	111,811	150,318	4.30
Mora	Carson-Santa Fe	1,242,880	121,891	30,206	91,685	7.38
Otero	Lincoln	4,248,320	660,009	189,405	470,604	11.08
Rio Arriba	Carson-Santa Fe Taos L. U. Project	3,747,200	1,266,235	64,065	1,202,170	32.08
Sandoval	Cibola-Santa Fe-Ramon Vigil Proj. Ojo de San Jose Proj.	2,439,040	365,995	25,477	340,518	13.96
San Miguel	Santa Fe	3,039,360	341,545	45,821	295,724	9.73
Santa Fe	Santa Fe-Ramon Vigil Proj.- Gabaldon Proj.	1,243,520	217,839	21,317	196,522	15.80
Sierra	Cibola-Gila	1,941,760	391,557	11,255	380,302	19.58
Socorro	Cibola-Lincoln	4,974,080	1,032,854	122,333	910,521	18.30
Taos	Carson-Santa Fe-Taos Proj.	1,443,840	468,938	77,914	391,024	27.08
Torrance	Cibola-Lincoln	2,137,600	297,988	35,985	262,003	12.26
Valencia	Cibola	3,607,680	390,979	264,844	126,135	3.50
STATE TOTAL		57,981,440	10,257,263	1,283,507	8,973,756	

IMPROVED PUBLIC RECREATION AREAS ON NATIONAL FORESTS IN REGION 3

ARIZONA

APACHE

Picnic Grounds (3)

Elderberry
Junction Spur
Luna Reservoir

Forest Camps (21)

Benny Creek
Greer
East Fork
Sheep Crossing
Big Lake
West Fork
Colonel
Warren
P. S.
Diamond Rock
Aspen
Hall
Beaver Dam
Buffalo Crossing
Hannagan
K. P. Cienega
Grant Creek
Lower Blue
Middle Blue
Blue Crossing
Upper Blue

Camp and Picnic Grounds (2)

South Fork
Alpine

Vistas (1)

Blue

COCONINO

Picnic Grounds (5)

Fulton Spring
Schnebly Hill
Lava Cave
Oak Creek
Bakers Butte

COCONINO (Continued)

Forest Camps (13)

Townsend
Kit Carson
Dairy Springs
Double Springs
"R. H."
Kehl Spring
Pine Flat
Sliderock
Banjo Bill
Manzanita
Clint's Well
Lee Johnson
General Spring

Camp and Picnic Grounds (1)

Lake Mary

Vistas (4)

Oak Creek
Schnebly Hill
Bakers Butte
Mogollon Rim

Winter Sports Areas (1)

Arizona Snow Bowl

CORONADO

Picnic Grounds (5)

Sabino Canyon
Bog Springs
Roundup
John Hands
South Fork

Forest Camps (21)

Bear Wallow
Soldier Camp
Middle Sabino
Marshall Gulch
Madera Canyon
Big Rock
Calabasas
Pena Blanca
Rucker

ARIZONA (Cont'd)

CORONADO (Continued)

Forest Camps (Continued)

Bathtub
Cypress
Hermitage
Horse
Sycamore
Turkey Creek
Pinery
Rustler Park
Herb Martyr
Stewart
Idlewild
Sunny Flat

Winter Sports Areas (1)

Rustler Park

CROOK

Picnic Grounds (8)

Marijilda
Moon Creek
Wet Canyon
Turkey Flat
Pioneer Pass
Kellner Canyon
Pinal Mountain
Warnica Springs

Forest Camps (12)

Stray Horse
Engineer Spring
Upper Juan Miller
Lower Juan Miller
Honeymoon
Granville
Stockton Pass
Arcadia
Shannon
Hospital Flat
Soldier Creek
Jones Water

Camp and Picnic Grounds (2)

Oak Flat
Treasure Park

KAIBAB

Picnic Grounds (4)

Garland Prairie
White Horse
Sycamore
Kanab

Forest Camps (6)

Parks
Spitz Spring
Old Bill Williams
J. D. Dam
Jacob Lake
V. T.

Vistas (4)

Garland Prairie
Sycamore
House Rock
Kanab

Winter Sports Area (1)

Williams East

PRESCOTT

Picnic Grounds (4)

Thumb Butte
The Playgrounds
Potato Patch
Turney Gulch

Forest Camps (8)

Granite Creek
Indian Creek
Wolf Creek
Upper Wolf Creek
Mingus Mountain
Powell Springs
Hazelett Howllow
Kentuck Spring

Camp and Picnic Ground (1)

Granite Basin

Vistas (2)

Granite Basin
Caldwell Canyon

Winter Sports Areas (2)

Mingus Mountain
Saint Agatha

ARIZONA (Cont'd.)

SITGREAVES

Forest Camps (3)

Chevalon
Lakeside
Pinetop

Vistas (1)

Promontory Tower

Winter Sports Areas (1)

Springer Mountain

TONTO

Picnic Grounds (6)

Cave Creek
Seven Springs
Camp Creek
Coon Bluff
Blue Point
Canyon Lake

TONTO (Continued)

Forest Camps (8)

Broncho Canyon
Blue Point
Apache Lake
Pine
Sycamore
Horton-Tonto Creek
Reynolds Creek
Rose Creek

TOTAL DEVELOPED AREAS

ARIZONA

Picnic Grounds	35
Forest Camps	92
Camp and Picnic Grounds	6
Winter Sports Areas	6
Vistas	12
	151

NEW MEXICO

APACHE

Forest Camps (2)

Pueblo Park
Cottonwood Canyon

Vistas (1)

Chimney Rock

CORONADO

Forest Camps (1)

Clanton Canyon

CARSON

Picnic Grounds (2)

The Cave
Kiowa Springs

CARSON (Continued)

Forest Camps (21)

El Nogal
Las Petaca
Capulin
La Sombra
Comales
Agua Piedra
Echo Cave
La Junta
Angostura
Santa Barbara
Hondo Canyon
Cabresto Lake
Eagle Rock
Columbine
Goat Hill
La Bobita
Elephant Rock
June Bug
Lagunitas
La Jara
Canjilon

Camp and Picnic Grounds (2)

La Viniteria
El Rito

Winter Sports Areas (2)

Agua Piedra
Red River

NEW MEXICO (Cont'd.)

CIBOLA

Picnic Grounds (22)

Juan Tabo
La Cueva
Cole Spring
Cienega Canyon
Sulphur Canyon
Doc Long
Tree Spring
Dry Camp
Balsam Glade
Capulin
Sandia Crest
Kiwanis Point
Las Huertas Creek
Pine Flat
Cedro Peak
New Canyon
Mountainair Ranger Station
Luna Park
Water Canyon
McGaffey
Whitewater
Red Cloud

Forest Camps (6)

Fourth of July Spring
Capillo Peak
Bear Trap
Hughes Mill
Quaking Aspen
Turkey Spring

Camp and Picnic Grounds (3)

Tajique
Canyon Colorado
Canyon Lobo

Winter Sports Areas (2)

Sandia Mountain
McGaffey

Vistas (3)

Sandia Crest
Kiwanis Point
Capillo Peak

GILA

Picnic Grounds (6)

Little Walnut
Cherry Creek
McMillen
Pine Flat
Bursum
Emory Pass

Forest Camps (14)

Lower Sapillo
Goforth
Iron Creek
Wrights Cabin
Rocky Canyon
Black Canyon
Lower Black Canyon
Gilita
Willow Creek
Ben Lilly
Upper Whitewater
Whitewater
Little Dry
Big Dry

Vistas (2)

Emory Pass
Negrito Tower

LINCOLN

Picnic Grounds (2)

Sitting Bull Falls
Cedar Creek

Forest Camps (5)

James Canyon
Karr Canyon
Cherokee Bill
School House
Pine

Winter Sports Areas (1)

Cedar Creek

NEW MEXICO (Cont'd.)

SANTA FE

Picnic Grounds (5)

Spence Spring
Little Tesuque
Dalton
E. V. Long
Brides

Forest Camps (19)

Battleship Rock
Jemez River
La Cueva
Calaveras
Rio Las Vacas
East Fork
Jemez Falls
Las Conchas
Black Canyon
Fields Tract
Holy Ghost
Winsor Creek
Panchuela
Oak Flat
Fishing Hole
The Pine
Three Falls
Puerco
Mud Springs

Camp and Picnic Grounds (2)

Banco Bonito
Paliza

Winter Sports Areas (1)

Big Tesuque

JORNADA RANGE RESERVE

Picnic Grounds (1)

Rope Springs

TOTAL DEVELOPED AREAS

NEW MEXICO

Picnic Grounds	38
Forest Camps	68
Camp and Picnic Grounds	7
Winter Sports Areas	6
Vistas	6
	125

TOTAL DEVELOPED AREAS

REGION 3

Picnic Grounds	73
Forest Camps	160
Camp and Picnic Grounds	13
Winter Sports Areas	12
Vistas	18
	276

RECREATION VISITORS - 1945

(Estimates cover government owned lands only)

Recreation Areas	Arizona	New Mexico	Region 3
Campgrounds	54,485	29,070	83,555
Picnic Areas	149,450	93,470	242,920
Winter Sports Areas	4,000	6,940	10,940
Organization Camps	5,935	6,950	12,885
Hotel and Resorts	64,771	1,536	66,307
Recreation Residences	6,789	2,818	9,607
Wilderness Areas	1,257	3,860	5,117
Other Forest Areas	93,219	91,515	184,734
Highways and Roads	392,945	96,825	489,770
Totals	772,851	332,984	1,105,835

WILDERNESS AREAS

Forest	Name of Area	Acreage: National Forest	Acreage: Other	Logging	Grazing	Final Approval
Arizona						
Apache (Crook)	Blue Range	216,737	1,427	Deferred	To Capacity	8-20-36
Tonto	Mazatzal	205,000	346	Limited	Conservative	6-13-40
Tonto(Crook)	Superstition	131,754	66	Limited	Conservative	4-17-40
New Mexico						
Gila	Black Range	168,424	1,560	Discouraged	Conservative	8-20-36
Gila	Gila	562,609	4,445	Inaccessible	Continued	4-4-38 *
Santa Fe	Pecos Division	136,640	1,360	Discouraged	To continue	8-22-36

* Amended 11/25/44

WILD AREAS

Arizona						
Apache	Mt. Baldy	7,400		Inaccessible	Continued	8-20-36
Coconino Kaibab and Prescott	Sycamore Canyon	46,122	1,108	None	Continued	8-20-36
Coronado	Chiricahua	18,000		Discouraged	Conservative	9-18-40
Crook	Galiuro	55,000		Discouraged	Reserve Range	6-19-40
Prescott (Tonto)	Pine Mountain	17,424	76	None	To Decrease	8-22-36
Tonto	Sierra Ancha	29,834	66	Discouraged	Conservative	2-28-33 **
New Mexico						
Lincoln	White Mountain	22,800	1,200	Discouraged	Conservative	8-20-36
Santa Fe	San Pedro Parks	41,132		Not contemplated	Continued	9-16-40

** Amended 4/6/38

EXPERIMENTAL FORESTS

Arizona

Forest	Name of Area	Acreage: National Forest	Acreage: Other	Logging	Grazing	Final Approval
Coconino Kaibab	Fort Valley	4,770		Limited	None	1-28-36
Coconino	Long Valley	2,536	15	Limited	Capacity	3-31-36
Crook	Mt. Graham	3,040		Limited	Continued *	3-23-32
Tonto	Sierra Ancha	13,255		None	Continued	4-6-38

New Mexico

Lincoln	Cloudcroft	2,120		Limited	None	11-30-35

NATURAL AREAS

Arizona

Coconino	Oak Creek Canyon	940		None	None	10-15-31
Coconino	San Francisco Peaks	880		None	Conservative	10-15-31
Coronado	Butterfly Peak	1,000		None	"	7-25-35
Coronado	Chiminea Canyon	160		None	"	2-26-31
Coronado	Pole Bridge Canyon	320		None	Continued	2-26-31
Coronado	Santa Catalina	4,464		None	None	3-23-27

New Mexico

Santa Fe	Monument Canyon	640		None	None	10-1-32

RESEARCH AREA

New Mexico

Santa Fe	Univ. of New Mexico	10,000		Regular		5-29-30

*Parker Creek Area Closed

NET RECEIPTS FOR THE FISCAL YEAR 1945

State	TIMBER			Grazing	Land Use	Power	TOTAL
	Timber Sales	Forest Products	Timber Tres-pass				
Ariz.	$328,562.11	$647.50	$51.62	$252,436.87	$16,751.35	$8,376.71	$ 606,826.16
N.M.	175,447.92	346.10	208.49	123,922.86	9,771.71	124.54	309,821.62
R-3	$504,010.03	$ 993.60	$260.11	$376,359.73	$26,523.06	$8,501.25	$ 916,647.78

Due School Fund (Enabling Act June 20, 1910)

Arizona	$35,473.24
New Mexico	335.84

	Arizona	New Mexico
Net amounts on which 25% and 10% are computed	$571,352.92	$309,485.78
Due States: 25%	142,838.23	77,371.44
Due Road and Trail Fund: 10%	57,135.29	30,948.57
TOTALS	199,973.52	108,320.01

Value of timber delivered in exchange for land under the Act of March 20, 1922, less value previously delivered in cases rejected during the year: $18,876.00.

PAYMENTS TO STATES FROM NATIONAL FOREST RECEIPTS - JUNE 30, 1945

ARIZONA

Forest	County	Net Forest Area-Acres	Act June 20, 1910 (School Sections)	Act May 23, 1908 (25% Fund)
Apache	Apache	442,621	$	$ 8,751.70
	Greenlee	236,811		4,682.33
	Total	679,432	3,336.28	13,434.03
Coconino	Coconino	1,317,936		35,952.65
	Yavapai	426,370		11,631.16
	Total	1,744,306	11,817.23	47,583.81
Coronado	Cochise	482,052		4,193.47
	Pima	384,675		3,346.36
	Pinal	24,131		209.92
	Santa Cruz	425,325		3,699.99
	Total	1,316,183	2,843.49	11,449.74
Crook	Cochise	22,400		183.67
	Gila	340,420		2,791.35
	Graham	397,275		3,257.54
	Greenlee	512,118		4,199.22
	Maricopa	10,866		89.10
	Pinal	139,575		1,144.48
	Total	1,422,654	2,897.04	11,665.36
Kaibab	Coconino	1,734,675		7,165.69
	Mohave	28,059		115.91
	Yavapai	16,233		67.05
	Total	1,773,967	1,825.01	7,348.65
Prescott	Coconino	43,252		284.00
	Yavapai	1,222,151		8,024.97
	Total	1,265,403	2,063.49	8,308.97
Sitgreaves	Apache	44,210		1,479.87
	Coconino	287,325		9,618.00
	Navajo	471,231		15,774.07
	Total	802,766	6,673.53	26,871.94
Tonto	Gila	1,335,693		8,962.96
	Maricopa	680,935		4,569.31
	Pinal	59,028		396.10
	Yavapai	334,911		2,247.36
	Total	2,410,567	4,017.17	16,175.73
Total for Arizona		11,420,278	$35,473.24	$142,838.23

Distribution by Counties of the 25% Fund (Last Column)

Apache	$ 10,231.57	Greenlee	$ 8,881.55	Pinal	$ 1,750.50
Cochise	4,377.14	Maricopa	4,658.41	Santa Cruz	3,699.99
Coconino	53,020.34	Mohave	115.91	Yavapai	21,970.54
Gila	11,754.31	Navajo	15,774.07		
Graham	3,257.54	Pima	3,346.36	Total	$142,838.23

PAYMENTS TO STATES FROM NATIONAL FOREST RECEIPTS - JUNE 30, 1945

NEW MEXICO

Forest	County	Net Forest Area-Acres	Act June 20, 1910 (School Sections)	Act May 23, 1908 (25% Fund)
Apache	Catron	889,698	$ 81.01	$ 18,663.46
Carson	Colfax	6,293		36.51
	Mora	2,496		14.48
	Rio Arriba	785,397		4,556.71
	Taos	321,806		1,867.05
		1,115,992	28.10	6,474.75
Cibola	Bernalillo	81,100		479.19
	Catron	203,511		1,202.47
	McKinley	150,318		888.17
	Sandoval	45,263		267.44
	Sierra	20,766		122.70
	Socorro	908,655		5,368.91
	Torrance	171,405		1,012.77
	Valencia	126,135		745.30
	Total	1,707,153	43.78	10,086.95
Coronado	Hidalgo	124,988	5.01	1,153.55
Gila	Catron	1,141,545		5,061.44
	Grant	887,060		3,933.09
	Hidalgo	7,653		33.93
	Sierra	359,536		1,594.14
	Total	2,395,794	46.11	10,622.60
Lincoln	Chavez	40,138		302.79
	Eddy	134,739		1,016.44
	Lincoln	440,725		3,324.72
	Otero	470,604		3,550.11
	Socorro	1,866		14.08
	Torrance	90,598		683.44
	Total	1,178,670	38.60	8,891.58
Santa Fe	Mora	89,189		1,527.97
	Rio Arriba	412,392		7,065.05
	Sandoval	274,878		4,709.17
	San Miguel	295,724		5,066.30
	Santa Fe	179,615		3,077.14
	Taos	1,921		32.92
	Total	1,253,719	93.23	21,478.55
Total for New Mexico		8,666,014	$335.84	$77,371.44

Distribution by Counties of the 25% Fund (Last Column)

Bernalillo	$ 479.19	Lincoln	$ 3,324.72	Santa Fe	$ 3,077.14
Catron	24,927.37	McKinley	888.17	Sierra	1,716.84
Chavez	302.79	Mora	1,542.45	Socorro	5,382.99
Colfax	36.51	Otero	3,550.11	Taos	1,899.97
Eddy	1,016.44	Rio Arriba	11,621.76	Torrance	1,696.21
Grant	3,933.09	Sandoval	4,976.61	Valencia	745.30
Hidalgo	1,187.48	San Miguel	5,066.30	Total	$77,371.44

ROADS AND TRAILS - JUNE 30, 1945

During Fiscal Year 1945 — ARIZONA

Type of Road	Construction Miles	Construction Cost	Maintenance Miles	Maintenance Cost	TOTAL
Forest Highways	4.9	$ 97,763	**290	12,269	$ 110,032
Forest Devlpmt. Roads	*10.6	75,908	#6,364	176,686	252,594
Trails	15	1,807	##1,357	29,312	31,119
TOTAL		175,478		218,267	393,745

* 5 Mi. Access - Strategic materials
**266 Mi. Cooperative
1754 Mi. other Agencies
141 Mi. other Agencies

To June 30, 1945

Forest Highways	680	10,579,411		430,460	11,009,871
Forest Devlpmt. Roads	3,579	9,090,455		1,929,548	11,020,003
Trails	3,221	581,917		404,229	986,146
TOTAL		20,251,783		2,764,237	23,016,020

During Fiscal Year 1945 — NEW MEXICO

Forest Highways	0	31,775	-	17	31,792
Forest Devlpmt. Roads	*14.5	74,583	**5,296	176,527	251,110
Trails	0	0	#3,916	17,028	17,028
TOTAL		106,358		193,572	299,930

* 8 Mi. Access - Strategic materials
** 544 Mi. Other Agencies
# 180 Mi. Other Agencies

To June 30, 1945

Forest Highways	329.6	6,731,021		508,375	7,239,396
Forest Devlpmt. Roads	2,435.6	7,176,392		2,126,984	9,303,376
Trails	1,960.9	253,732		288,880	542,612
TOTAL		14,161,145		2,924,239	17,085,384

During Fiscal Year 1945 — REGION

Forest Highways	4.9	129,538	**290	12,286	141,824
Forest Devlpmt. Roads	*25.1	150,491	#11,660	353,213	503,704
Trails	15	1,807	##5,273	46,340	48,147
TOTAL		281,836		411,839	693,675

* 13.4 Mi. - Access - Strategic Materials
** 266 - Cooperative
# 2298 Other Agencies
321 Other Agencies

To June 30, 1945

Forest Highways	1,009.6	17,310,432		938,835	18,249,267
Forest Devlpmt. Roads	6,014.6	16,266,847		4,056,532	20,323,379
Trails	5,181.9	835,649		693,109	1,528,758
TOTAL		34,412,928		5,688,476	40,101,404

SCHOOLS GIVING COURSES LEADING TO A DEGREE IN FORESTRY
(As compiled by the U.S. Forest Service)

University of California, Berkeley 4, Calif.
Colorado State College, Fort Collins, Colo.
University of Connecticut, Storrs, Conn.
Duke University, Durham, North Carolina
University of Georgia, Athens, Georgia
Harvard University, Petersham, Mass.
University of Idaho, Moscow, Idaho
University of Idaho, Southern Branch, Pocatello, Idaho
Iowa State College, Ames, Iowa
Louisiana State University, Baton Rouge, La.
University of Maine, Orono, Maine
Massachusetts State College, Amherst, Mass.
Michigan State College, East Lansing, Michigan
University of Michigan, Ann Arbor, Michigan
University of Minnesota, Saint Paul, Minn.
Montana State University, Missoula, Montana
University of Nevada, Reno, Nevada (Pre-forestry only).
University of New Hampshire, Durham, N.H.
North Carolina State College, Raleigh, N.C.
Oregon State College, Corvallis, Oregon
Pennsylvania State College, State College, Penn.
Purdue University, Lafayette, Indiana
Syracuse University, Syracuse, N.Y.
Utah State College, Logan, Utah
University of Washington, Seattle, Wash.
Washington State College, Pullman, Wash.
West Virginia University, Morgantown, W. Va.
Yale University, New Haven, Conn.
University of Florida, Gainesville, Fla.

1631 First sawmill at Berwick, Maine.
1640 First Ordinance governing timber use (Exeter, N. H.).
1822 DeWitt Clinton, Governor of New York, pleaded for practice of conservation.
1828 Live oak and cedar reservations for Navy made in Louisiana (19,000 acres).
1831 Timber cutting on public lands prohibited.
1849 Report of Patent Office urges conservation.
1867 Wisconsin appointed committee to report on effect of forest destruction.
1870 Census. Forest area canvassed.
1872 Governor Morton of Nebraska established Arbor Day.
1873 Forestry Committee of American Association for the Advancement of Science presented memorials to Congress, asking for the appointment of a commission of forestry.
Timber culture act.
1876 Congress established an "agency" on forestry in the Department of Agriculture. Dr. Franklin B. Hough appointed Commissioner of Forestry.
1877 Congress granted its first appropriation of $6,000 for the purpose of obtaining information preparatory to establishing a Division of Forestry.
1882 American Forestry Association started April 25 at Cincinnati.
1884 The duty of making experiments with timber was added to work of Division of Forestry.
1886 Division of Forestry in Department of Agriculture created.
1891 By Act of Congress, the President was given power to establish forest reservations.
President Harrison established the Yellowstone Park Timber Land Reserve to be under control of the Land Office.
1892 Pecos River Forest Reserve established in New Mexico.
1893 Grand Canyon Forest Reserve established in Arizona.
1896 Secretary of Interior requested the National Academy of Science to investigate and recommend a National Forest policy.
1897 By the Act of June 4, the forest reserves were put under administration and from this Act, with subsequent amendments, the forests are now being administered. The Land Office had charge of administration. The Division of Forestry gave technical advice. The U. S. Geological Survey was charged with surveying and mapping the forests.
1898 The Division of Forestry employed a total of six clerks and five scientific employees.
The first field work was done, which consisted of special investigation in connection with lumbering.
1901 The Division of Forestry was raised to the rank of Bureau but the change was in name only.
1905 By the Act of February 1, forestry work was consolidated and the forest reserves were transferred to the Department of Agriculture and the work of the Service as we know it today, started. In July 1905, the Bureau of Forestry became the Forest Service.
1907 The "forest reserves" were changed to National Forests in name to correct the impression that they were withdrawn from use.
1908 The direct administration of field work was transferred from Washington, D. C., to six district headquarters in the West; in 1914 a seventh district was established for the Appalachian region; in 1921 an eighth district was established in Alaska, and in 1929, a ninth district was set up for the Lake States.

1909 Between 1901 and 1909, President Roosevelt set aside over 148,000,000 acres of National Forests.

1911 By Act of March 1 (Weeks Law), acquisition of forest lands on headwaters of navigable streams east of Mississippi River made possible.

1922 General Forest Exchange Act authorizing exchange of lands in National Forests, cutting of timber in exchange for land, reservation of timber, etc., amended and extended 1923, 1926, 1928, 1929, 1935.

1924 The Reforestation Act (Clarke-McNary) was passed on June 7, greatly extending the scope of government cooperation in forestry.

1928 McNary-Woodruff Act was passed, authorizing appropriations of $2,000,000 for 1929 and $3,000,000 each for 1930 and 1931 for purchase of forest lands.

Forest Research Act (McNary-McSweeney) was passed, providing for a national forest research program on the part of seven governmental bureaus.

1930 Forest Service Districts became "Regions."

Secretary of Agriculture authorized to enlarge tree planting operations on National Forests.

Secretary of Agriculture authorized in cases of emergency to incur expense in search of persons lost in National Forests and in transporting persons seriously ill, injured or who may die within National Forests to nearest place where may be transferred to interested relatives or local authorities.

1935 Secretary of Agriculture authorized to cooperate with States in acquisition and administration of State Forests (Fulmer Act).

1936 Secretary of Agriculture authorized to maintain forest experiment stations throughout the United States.

1937 Secretary of Agriculture authorized to cooperate in development of farm forestry in States and Territories. (Norris-Doxey Act).

1938 Senate Concurrent Resolution No. 31 adopted June 13, 1938, create a Joint Congressional Committee to study the forest situation in the United States.

1941 Joint Congressional Committee on Forestry issued a report on "Forest Lands of the United States," citing deplorable conditions in the forest areas of many sections of U. S. and recommending "the establishment of a real forest economy in this country which, as an important segment of the broad agricultural economy, will put to constructive use one-third of our total land areas." Recommendations included various cooperative aids to private forest land owners, expansion of public ownership, and a federal-state system of regulation governing forestry practices.

1944 Secretary of Agriculture and Secretary of the Interior authorized by Congress to establish cooperative sustained-yield units, under cooperative agreements with private owners of forest land within the units.

Secretary of Agriculture authorized and directed by Congress to cooperate in making a national survey of forest resources.

Clarke-McNary Act (see "1924") amended, increasing funds to not exceeding $1,000,000 annually.